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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 09/407,550 | Applicant(s) SAKO ET AL. | |
| | Examiner Curtis B. Odom | Art Unit 2634 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15, 17-45, 48-60, 62-103 and 105-149 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15, 17-20, 22-45, 48-60, 62-103 and 105-149 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/28/1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendments filed on 2/28/2006 have been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13, 15, 17-45, 48-60, 62-103, and 105-149 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 58-60, 62-70, 72-82, 88, 94-98, 101-103, and 105-113, and 115-125, 131, 137-141, 144 and 145 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeffers et al. (previously cited in Office Action 11/13/03).

Regarding claim 58, Jeffers et al discloses a receiving method for receiving (column 15, lines 22-34) a predetermined broadcast signal (impulse pay-per-view) and predetermined additional information (header information) in which acquiring information (program-related

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information such as tag number) necessary to acquire related data related to this broadcast signal is disposed, the method comprising:

receiving (column 17, lines 40-52) the broadcast signal (pay-per-view) and additional header information;

temporarily storing (column 14, lines 20-32 and column 22, lines 23-34) in a microcontroller/microprocessor the received additional header information into a temporary storage, wherein all information in the decoder passes through the microcontroller, the additional header information being associated with the pay-per-view broadcast (column 17, lines 40-52) and

storing (column 15, lines 22-34) the acquiring information (program related information such tag number) disposed in the additional header information (column 17, lines 40-52) temporarily stored in the microcontroller/microcomputer into a main storage (decoder memory) when the global address of the received information matches that of the decoder memory (column 22, lines 56-60) when there is a user input from a keyboard to request a pay-per-view program while receiving the pay-per-view program (column 15, lines 22-33).

Regarding claim 59, Jeffers et al. discloses a receiving method as claimed in claim 58, further comprising an error detection/correction step for performing error detection/correction on the additional header information (column 16, lines 39-58).

Regarding claim 60, Jeffers et al discloses a receiving method as claimed in claim 58, further comprising temporarily storing the broadcast signal received in the receiving step in a buffer (column 13, lines 8-13).

Regarding claim 62, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the microcontroller is updated by newly received additional information on each occasion when new additional information is received in the temporary storage step (column 14, lines 20-26).

Regarding claim 63, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the additional header information in which the acquiring information (tag number) concerning the related data related to the broadcast signal is received on plural occasions while the broadcast signal is being transmitted (column 16, lines 38-45).

Regarding claim 64, Jeffers et al discloses a receiving method as claimed in claim 63, wherein the additional header information is transmitted periodically (column 16, lines 38-45).

Regarding claim 65, Jeffers et al discloses a receiving method as claimed in claim 63, wherein the acquiring information (tag number), which is disposed in the additional header information transmitted on plural occasions, is stored when the user requests a pa-per-view program (column 17, lines 40-52).

Regarding claim 66, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the acquiring information comprises a unique tag number uniquely assigned to the pay program related data (column 17, lines 40-52).

Regarding claim 67, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the acquiring information comprises recognizing information (identification tag) useful for recognizing the content of the program related data (column 17, lines 40-52).

Regarding claim 68, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the acquiring information comprises signature number access information used for

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accessing a decoder memory location where the related data (signature key) is provided (column 18, lines 11-18).

Regarding claim 69, Jeffers et al discloses a receiving method as claimed in claim 58, further comprising an outputting step for outputting the tag identification data (column 17, lines 56-67).

Regarding claim 70, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the related data is video data or audio data when the broadcast signal is predetermined video data or audio data (column 17, lines 5-13), wherein program-related data is first stored in a microcontroller/microcomputer (column 22, lines 22-35) and then permanently stored in memory if the group address matches the decoder memory (column 22, lines 56-60).

Regarding claim 72, Jeffers et al discloses a receiving method as claimed in claim 58, wherein information useful for recognizing the content (decryption data) of the related data is disposed in the additional header information in addition to the acquiring information (column 18, lines 9-18).

Regarding claim 73, Jeffers et al discloses a receiving method as claimed in claim 72, further comprising an outputting step for outputting information (decryption data) useful for recognizing the content of the related data (column 18, lines 9-18).

Regarding claim 74, Jeffers et al discloses a receiving method as claimed in claim 58, wherein the related message data is also disposed in the additional information in addition to the acquiring information (column 18, lines 9-23).

Regarding claim 75, Jeffers et al discloses a receiving method as claimed in claim 74, further comprising a related message data storing step for storing the related message data

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disposed in the additional information when the upon initiating a subscription by a user (column 18, lines 54-64 and column 19, lines 11-23).

Regarding claim 76, Jeffers et al discloses a receiving method as claimed in claim 75, wherein the related message data disposed in the additional information is encoded with error check words (column 18, lines 18-23).

Regarding claim 77, which inherits the limitations of claim 76, Jeffers et al. further discloses acquiring a decoding key for decoding the related message data based on the acquiring information (column 18, lines 9-18).

Regarding claim 78, which inherits the limitations of claim 77, Jeffers et al. further discloses decoding the related data based on the decoding key (column 18, lines 9-18).

Regarding claim 79, which inherits the limitations of claim 58, Jeffers et al. discloses acquiring related message data stored in a memory based on the nature of acquiring information (column 22, lines 61-68) when the related data is stored in a the decoder memory.

Regarding claim 80, which inherits the limitations of claim 79, Jeffers et al. discloses a decoding key for decoding the related message data is also acquired in the acquiring step when the related message data stored in the decoder memory is encoded (column 14, lines 37-41 and column 18, lines 9-18), wherein the key used for decoding is loaded in the memory of the decoder by the factory while the message is encoded with the signature number (column 18, lines 9-18) in order for both the key and signature number to match which results in decoding of the message (column 18, lines 9-18).

Regarding claim 81, which inherits the limitations of claim 80, Jeffers et al. discloses decoding the related data based on the decoding key (column 18, lines 9-18).

Regarding claim 82, which inherits the limitations of claim 58, Jeffers et al. discloses the broadcast signal comprises a second signal superimposed on a first signal (column 5, lines 38-61), wherein the audio signal (second signal) is superimposed on a video signal (first signal) or both the audio and video signal are superimposed on a carrier signal (modulation).

Regarding claim 88, which inherits the limitations of claim 82, Jeffers et al. discloses the first signal is a first image or sound, (video signal) the second signal is a second image or sound (audio signal), and part of the first image or sound and the second image or sound overlap in time in the broadcast signal using time division multiplexing (column 1, line 59-column 2, line 5), wherein the combination of the signals using time division multiplexing can cause portions of the signals to overlap in time.

Regarding claim 94, which inherits the limitations of claim 58, Jeffers et al. discloses splitting (column 16, lines 1-19) the related data into a first component (video and audio signals) and a second component (message data, column 18, lines 19-23).

Regarding claim 95, which inherits the limitations of claim 94, Jeffers et al. discloses the message data is also disposed in the additional header information (column 18, lines 19-23),

Regarding claim 96, which inherits the limitations of claim 95, Jeffers et al. discloses the second component disposed in the additional header information is encoded with error check words (column 18, lines 19-23).

Regarding claim 97, which inherits the limitations of claim 96, Jeffers et al. discloses acquiring a decoding key for decoding the message data based on the acquiring information (column 18, lines 9-18).

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Regarding claim 98, which inherits the limitations of claim 97, Jeffers et al. further discloses decoding the second component based on the decoding key (column 18, lines 9-18).

Regarding claims, 101-103, and 105-113, and 115-125, 131, 137-141, the claims include limitations corresponding to the above rejection of claims 58-60, 62-70, 72-82, 88, 94-98 which is applicable hereto.

Regarding claim 144, Jeffers et al. discloses a transfer method of a transfer system comprising a transmitting device (Fig. 1) for transmitting a predetermined broadcast signal and predetermined additional header information, and a receiving device (Figs. 2A and 2B) for receiving the predetermined broadcast signal together and the predetermined additional information, wherein the transmitting comprises:

constructing (column 16, lines 21-33) the additional header information in which acquiring information such as a tag or signature number (column 17, lines 40-52 and column 18, lines 9-18) necessary to acquire related data to the broadcast signal is disposed; and

transmitting the broadcast signal (column 2, lines 35-43), and transmitting the additional header information (column 16, lines 39-45), in which the acquiring information concerning the related data to this broadcast signal is disposed repetitiously as apart of the header information during the transmission of the broadcast signal (Fig. 3); and

the receiving comprises:

receiving (column 17, lines 40-52) the broadcast signal (pay-per-view) and additional header information;

temporarily storing (column 14, lines 20-32 and column 22, lines 23-34) in a microcontroller/microprocessor the received additional header information into a temporary

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storage, wherein all information in the decoder passes through the microcontroller, the additional header information being associated with the pay-per-view broadcast (column 17, lines 40-52) and

storing (column 15, lines 22-34) the acquiring information (program related information such tag number) disposed in the additional header information (column 17, lines 40-52) temporarily stored in the microcontroller/microcomputer into a main storage (decoder memory) when the global address of the received information matches that of the decoder memory (column 22, lines 56-60) when there is a user input from a keyboard to request a pay-per-view program while receiving the pay-per-view program (column 15, lines 22-33).

Regarding claim 145, the claimed device includes features corresponding to subject matter mentioned in the above rejection of claim 144 which is applicable hereto.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11-13, 15, 17-20, 22-31, 33-41, 43-45, 48-57, 83-87, 89-93, 99, 100, 126-130, 132-136, 142, and 143 are rejected under 35 U.S.C. 103(a) as being unpatentable over

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Jeffers et al. (previously cited in Office Action 11/13/03) in view of Lert, Jr. et al. (U. S. Patent No. 4, 230, 990).

Regarding claim 1, Jeffers et al. discloses a transmitting method for transmitting a predetermined broadcast signal together with predetermined additional (header) information (column 5, lines 38-61), the method comprising:

constructing (column 5, lines 38-61 and column 16, lines 1-37) the additional information (data stream containing header and audio signal) in which acquiring information necessary to acquire related data to the broadcast signal, wherein the broadcast signal is a signal in which a second (audio) signal is superimposed also on a first (video) signal (column 5, lines 38-61 and column 9, lines 23-33), wherein the audio signal (second signal) is superimposed on a video signal (first signal); and

transmitting the broadcast signal (column 2, lines 35-43), and transmitting the additional (header) information, in which the acquiring information concerning the related data to this broadcast signal is disposed on plural occasions during the transmission of the broadcast signal (column 16, lines 38-45).

Jeffers et al. does not disclose the additional information includes an audio (second) signal.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which is used to identify the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal

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(column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as a program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 2, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the additional information (program header) in which the acquiring information is disposed is transmitted periodically in the transmitting step (Fig. 3, and column 16, lines 39-45).

Regarding claim 3, Jeffers et al. discloses transmitting method as claimed in claim 1, further comprising an error detection/correction step for performing error detection/correction on additional (header) information (column 16, lines 39-58).

Regarding claim 4, Jeffers et al. discloses a transmitting method as claimed in claim 3, wherein the additional (header) information is transmitted in units on which error detection/correction has been performed (column 16, lines 39-58), wherein packets are units.

Regarding claim 5, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the acquiring information comprises unique information uniquely assigned to the related data (column 5, lines 54-61) such as decryption data.

Regarding claim 6, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the acquiring information comprises recognizing information useful for recognizing the content of the related data (column 6, line 44-63) such as synchronization data.

Regarding claim 7, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the acquiring information comprises access information used for accessing an access

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location where the related data is provided (column 7, lines 30-44) such as decryption information.

Regarding claim 8, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the additional (program-related) information in predetermined units comprises the acquiring information according to claim 1 when the additional information is transmitted in predetermined bit units (column 16, lines 1-19).

Regarding claim 9, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein the program-related data is video data or audio data such as video synchronization data when the broadcast signal is predetermined video data or audio data (column 5, lines 54-61).

Regarding claim 11, Jeffers et al. discloses a transmitting method as claimed in claim 1, wherein information (decryption data) useful for recognizing the content of the related data (encrypted data message) is disposed in the additional program-related information in addition to the acquiring synchronization information in the constructing step (column 5, lines 54-61 and column 7, lines 31-44).

Regarding claim 12, Jeffers et al. discloses transmitting method as claimed in claim 1, wherein the related program identification data is disposed in the additional information in addition to the acquiring synchronization information in the constructing step (column 5, lines 54-61).

Regarding claim 13, Jeffers et al. discloses a transmitting method as claimed in claim 12, wherein the related data in which the additional information is disposed in the broadcast signal, is encoded (column 1, lines 35-47).

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Regarding claim 15, which inherit the limitations of claim 1, Jeffers et al. discloses the first signal in a predetermined image or sound (video signal), and the second signal is a noise (audio signal) apart from the image or sound (column 16, lines 1-18).

Regarding claim 17, Lert, Jr. et al further discloses the cue signal in encoded as an ancillary audio signal (column 1, lines 48-62 and column 18, lines 17-25). It would have been obvious to include this feature since Lert, Jr. et al. states the encoded signal is reliable (column 18, lines 17-25).

Regarding claim 18, which inherits the limitations of claim 1, Jeffers et al. discloses the first signal is a first image or sound (video signal), the second signal is a second image or sound (audio signal), and part of the first image or sound and the second image or sound overlay in time in the broadcast signal using time division multiplexing (column 1, line 59-column 2, line 5), wherein the combination of the signals using time division multiplexing causes portions of the signals to overlap in time.

Regarding claim 19, which inherits the limitations of claim 18, Jeffers et al. discloses the end of the first image or sound (video signal) and the beginning of the second image or sound (audio signal) overlap when the first image or sound is transmitted first and the second image or sound is transmitted later using time division multiplexing (column 1, line 59-column 2, line 5), wherein time division multiplexing techniques allow control the time at which signal are transmitted, making it possible for signals to overlap.

Regarding claim 20, which inherits the limitations of claim 18, Jeffers et al. discloses the time amplitude of the part where part of the first image or sound and the second image or sound overlap, is variable using time division multiplexing (column 1, line 59-column 2, line 5),

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wherein time division multiplexing techniques allow the control of time amplitudes for transmission.

Regarding claim 22, Lert, Jr. et al. further discloses the cue signal which includes a sound which allows identification of the broadcast signal in combined (overlaps) with the broadcast signal (column 9, lines 53-62) and is constructed during construction of the broadcast signal (column 11, lines 18-30). It would have been obvious to include this feature since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 23, which inherits the limitations of claim 22, Lert Jr. et al. discloses the cue signal which comprises a sound is transmitted with the broadcast signal corresponding to either a first image or sound (video signal), or a broadcast signal corresponding to a second image or sound (audio signal), or to both, in the transmitting step (column 9, lines 53-62). would have been obvious to include this feature since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 24, which inherits the limitations of claim 22, Jeffers et al. discloses the cue signal including identification information is encoded as an ancillary audio signal (column 1, lines 48-62 and column 18, lines 17-25). It would have been obvious to include this feature since Lert, Jr. et al. states the encoded signal is reliable (column 18, lines 17-25).

Regarding claim 25, which inherits the limitations of claim 1, Jeffers et al. discloses a splitting step for splitting (column 16, lines 1-19) the related data into a first component (video and audio signals) and a second component (program-related, sync, encryption, and control

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information), wherein the first component is transmitted as the broadcast signal (video and audio signals) in the transmitting step (column 1, line 65-column 2, line 5).

Regarding claim 26, which inherits the limitations of claim 25, Jeffers et al. discloses the second component (encryption data) is also disposed in the additional header information in addition to the acquiring synchronization information (column 15, lines 46-64 and column 17, lines 27-34), in the constructing step.

Regarding claim 27, which inherits the limitations of claim 26, Jeffers et al. discloses the second component disposed in the additional header information is encoded with error check words (column 16, lines 46-59).

Regarding claim 28, which inherits the limitations of claim 25, Jeffers et al. discloses the first component is an upper bit audio data (column 16, lines 1-18); but does not disclose the second component is a high region component or a lower bit of the video data or audio data.

However, Lert Jr. et al. transmitting related data (cue signals) which include bits of ancillary audio signals (column 18, lines 17-25) used for identification of the broadcast signal (column 11, lines 37-50). Therefore, it would have been obvious to include this feature as second component since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 29, which inherits the limitations of claim 1, Jeffers et al. discloses the acquiring information comprises access information (group address) used for accessing a database (decoder memory in which the related (key) information is stored (column 22, line 35-column 23, line 30).

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Regarding claim 30, which inherits the limitations of claim 29, Jeffers et al. discloses the acquiring information comprises unique information (data-sync information) assigned to the related (encryption) data in addition to the access information (column 23, lines 19-30).

Regarding claim 31, which inherits the limitations of claim 30, Jeffers et al. discloses the unique program-related information representative of an ISRC (column 23, lines 19-30), wherein the unique information could be any program related data such as an ISRC.

Regarding claim 33, Lert Jr. et al. discloses the cue signal comprises identification information for a visual or audio advertisement (commercial) when the broadcast signal is a predetermined program (column 11, lines 19-30). Therefore, it would have been obvious to include this feature as second component since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 34, Jeffers et al. discloses a transmitting device for transmitting a predetermined broadcast signal together with predetermined additional header information (Fig. 1, column 5, lines 38-61), the device comprising:

constructing means for constructing (column 5, lines 38-61 and column 16, lines 1-37) the additional header information in which acquiring information (decryption data) necessary to acquire related audio data to the broadcast signal is disposed (column 17, lines 29-34), wherein the broadcast signal is a signal in which comprises a second signal (audio signal) is superimposed on a first video signal (column 5, lines 38-42); and

transmitting means (column 2, lines 35-43) for transmitting the broadcast signal, and transmitting the additional header information, in which the acquiring (decryption data)

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information concerning the related data to this broadcast signal is disposed on plural occasions in the header information during the transmission of the broadcast signal (column 16, lines 38-45).

Jeffers et al. does not disclose the constructing means constructs the additional information by superimposing the second signal (audio signal) in addition to the acquiring information (header).

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which is used to identify the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion (super-imposing) of the cue signal of Lert, Jr et al. in broadcast related data such as a header information since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claims 35-41, 43-45, and 48-57, the claimed apparatus includes features corresponding to the above rejection of claims 2-7, 9, 11-13, 17, 18, and 22-29 which is applicable hereto.

Regarding claim 83, (see rejection above of claim 83), Jeffers et al. does not disclose the second (audio) signal disposed in additional header information.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which is used to identify the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as a program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 84, which inherits the limitations of claim 83, Lert Jr, et al. discloses the cue signal including identification information is encoded as an ancillary audio signal (column 1, lines 48-62 and column 18, lines 17-25). It would have been obvious to include this feature since Lert, Jr. et al. states the encoded signal is reliable (column 18, lines 17-25).

Regarding claim 85, which inherits the limitations of claim 84, Jeffers et al. discloses acquiring a decoding key for decoding a second signal (audio signal) based on the acquiring information (column 17, lines 28-34).

Regarding claim 86, which inherits the limitations of claim 85, Jeffers et al. discloses decoding the second signal (audio signal) based on the decoding key (column 17, lines 28-34).

Regarding claim 87, which inherits the limitations of claim 86, Jeffers et al. discloses generating the program-related data based on the broadcast signal (column 16, lines 1-18), but

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does not disclose generating the program-related data based a second (audio) signal disposed in additional information.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which generated identification data related to the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as additional program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 89 (see rejection of claim 88), Jeffers et al. does not disclose an image or sound disposed in the additional header information.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which generated identification data related to the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of

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Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as additional program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 90, which inherits the limitations of claim 83, Lert Jr, et al. discloses the cue signal including identification information is encoded as an ancillary audio signal (column 1, lines 48-62 and column 18, lines 17-25). It would have been obvious to include this feature since Lert, Jr. et al. states the encoded signal is reliable (column 18, lines 17-25).

Regarding claim 91, which inherits the limitations of claim 90, Jeffers et al. discloses acquiring a decoding key for decoding a second signal (audio signal) based on the acquiring information (column 17, lines 28-34).

Regarding claim 92, which inherits the limitations of claim 85, Jeffers et al. discloses decoding the second signal (audio signal) based on the decoding key (column 17, lines 28-34).

Regarding claim 93, which inherits the limitations of claim 86, Jeffers et al. discloses generating the program-related data based on the broadcast signal (column 16, lines 1-18), but does not disclose generating the program-related data based a second (audio) signal disposed in additional information.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which generated identification data related to the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the

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broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as additional program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 99, Jeffers et al. discloses generating the program-related data based on the broadcast signal (column 16, lines 1-18), but does not disclose generating the program-related data based a second (audio) signal disposed in additional information.

However, Lert, Jr. et al. discloses an audio signal known as a cue signal (column 14, lines 56-62) which generated identification data related to the broadcast signal (column 6, lines 15-20 and column 6, lines 31-40). Lert, Jr. et al. further discloses the cue signal is transmitted (inserted) on plural occasions during transmission of the broadcast signal (column 11, lines 18-30), wherein once the signal is broadcast (transmitted) the cue signal is used to identify the broadcast (program) signal (column 11, lines 37-50). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the broadcast method of Jeffers et al. with the insertion of the cue signal of Lert, Jr et al. in broadcast related data such as additional program header since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claim 100, which inherits the limitations of claim 94, Jeffers et al. discloses the related data is audio data or video data, wherein the first component is an upper bit audio data

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(column 16, lines 1-18); but Jeffers et al. does not disclose the second component is a high region component or a lower bit of the video data or audio data.

However, Lert Jr. et al. transmitting related data (cue signals) which include bits of ancillary audio signals (column 18, lines 17-25) used for identification of the broadcast signal (column 11, lines 37-50). Therefore, it would have been obvious to include this feature as second component since Lert, Jr et al. states the cue signal allows for an enormous reduction in the amount of data processing required in order to access program (broadcast) related information (column 6, lines 45-55).

Regarding claims 126-130, 132-136, 142, and 143, the claims include limitations corresponding to the above rejection of claims 83-87, 89-93, 99, and 100, which is applicable hereto.

7. Claims 71, 114, 148, and 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffers et al. (previously cited in Office Action 11/13/03) in view of Trissel et al. (U. S. Patent No. 5, 274, 815).

Regarding claims 71, 114, 148, and 149, Jeffers et al. and Lert, Jr et al. disclose all the limitations of claims 71, 114, 148, and 149 (see rejection of claim 58) except the related data is a computer program when the broadcast signal is video data or audio data obtained by executing the computer program.

However, Trissel et al. discloses computer programs allow the user flexibility during the execution of the computer program (column 1, lines 11-24). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that to implement the related data of Jeffers et al. as software (computer program) in order to obtain the audio and video data

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using a computer program as disclosed by Trissel et al. since Trissel et al. software allows the user the flexibility of controlling program results and flow during execution of the program (column 1, lines 11-24).

8. Claims 10, 42, 146, and 147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffers et al. (previously cited in Office Action 11/13/03) in view of Lert, Jr. et al. (U. S. Patent No. 4, 230, 990) as applied to claim 1, and in further view of Trissel et al. (U. S. Patent No. 5, 274, 815).

Regarding claims 10, 41, 146, and 147, Jeffers et al. and Lert, Jr et al. disclose all the limitations of claims 10, 41, 146, and 147 (see rejection of claim 1) except the related data is a computer program when the broadcast signal is video data or audio data obtained by executing the computer program.

However, Trissel et al. discloses computer programs allow the user flexibility during the execution of the computer program (column 1, lines 11-24). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that to implement the related data of Jeffers et al. and Lert Jr, et al. as software (computer program) in order to obtain the audio and video data using a computer program as disclosed by Trissel et al. since Trissel et al. software allows the user the flexibility of controlling program results and flow during execution of the program (column 1, lines 11-24).

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffers et al. (previously cited in Office Action 11/13/03) in view of Lert, Jr. et al. (U. S. Patent No. 4, 230, 990) as applied to claim 1, and in further view of Kahn et al. (U. S. Patent No 5, 777, 997).

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Regarding claim 32, Jeffers et al. and Lert Jr et al. disclose the broadcast can be a program of songs/records (see Lert Jr et al, column 1, lines 7-33). However, Jeffers et al. and Lert Jr. et al. do not disclose the additional header information comprises the titles of the songs, names of singers singing the songs, names of companies manufacturing the recording media on which the songs are recorded, jacket photos for the recording media, photos of the singers, or a part of the songs recorded on the recording media in the constructing step.

However, Kahn et al. discloses transmitting additional control data with an audio broadcast (column 1, line 63-column 2, line 5) wherein the control information includes song title, artist, producer, or record company (column 3, lines 33-43). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the additional information of Jeffers et al. and Lert Jr. et al. with the song information as disclosed by Kahn et al. for an audio broadcast since Kahn et al. states this provides the user with an easily compatible and simplified method of obtaining song information (column 2, lines 26-29).

Allowable Subject Matter

9. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
May 14, 2006

Pham Cong Tran

05/15/2006

Primary Examiner

KHANH TRAN